

## Beam irradiator and laser anneal device

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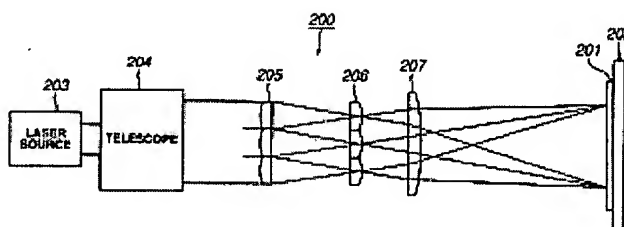
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### Abstract of US2004120050

According to the present invention, a laser annealing apparatus (10) includes a beam splitter (14) composed of first and second beam splitters (21, 22) disposed in parallel to each other to split one laser beam into four laser beams not interfering with each other, and a reflecting mirror (23). Upon the second beam splitter (22), there are incident a transmitted beam from the first beam splitter (21) and a laser beam outgoing from the first beam splitter (21) and then reflected by the reflecting mirror (23). The second beam splitter (22) provides two transmitted beams to outside, and the reflecting mirror (23) reflects the reflected beam from the second beam splitter (22) for traveling to outside. The distance between the two beam splitters (21 and 22), and the distance between the first beam splitter (21) and reflecting mirror (23), is larger than  $L/(2 \cos \theta)$  (where  $\theta$  is an incident angle and  $L$  is a coherence length).



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